

GD-2000

Installation Guide

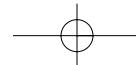
2nd Generation

DVD



April 1998





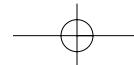
Important

1. *Read all of these instructions carefully and understand them before using your DVD-ROM drive.*
2. *Keep this instruction manual for future reference.*
3. *If this DVD-ROM drive changes ownership, be sure this manual accompanies the DVD-ROM drive.*

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**For USA**

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC RULES. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

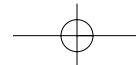
- 1) Re-orientate or relocate the receiving antenna.
- 2) Increase the separation between the equipment and receiver.
- 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- 4) Consult the dealer or an experienced radio/TV technician for help.

Caution:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For Germany / Für Deutschland

Module dürfen nur an eine Sicherheits-Kleinspannungs-Versorgung(SELV-Kreise) nach EN609501/VDE 0805 angeschlossen werden. Die Trennung von Netzspannung muß durch einen Sicherheitstransformator geschehen.



Labeling

The equipment is classified as a Class 1 level laser product.

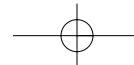


This label is fixed to the bottom of the DVD-ROM Drive.

Important Safeguards

SAFETY POINTS YOU SHOULD KNOW ABOUT YOUR EQUIPMENT

1. READ ALL INSTRUCTIONS.
2. SAVE THESE INSTRUCTIONS FOR LATER USE.
3. FOLLOW ALL WARNINGS AND INSTRUCTIONS MARKED ON THE PRODUCT.



Precautions For Safety

• Power Source

- This DVD-ROM drive should be operated from the type of power source indicated on the marked label. (+12V DC / ~ +5V DC)

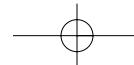
• To avoid the risk of electric short circuits or damage to your DVD-ROM

- Do not expose your DVD-ROM drive to rain or moisture.
- Do not open or remove the cover of your DVD-ROM drive.
- Turn off your SYSTEM and unplug the power supply cable of your SYSTEM from the wall outlet before installing your DVD-ROM drive, interface card or connecting cables.
- Do not allow liquids or foreign objects to get in.
- Do not place heavy loads on the DVD-ROM drive.
- Do not USE this DVD-ROM drive without mounting it.
- Firmly attach the DC power supply cable, connecting cables between the DVD-ROM drive and other devices, and keep them connected securely.

• In case of failure

In case of the following conditions, turn off the SYSTEM including the DVD-ROM drive and unplug the power supply cable of the SYSTEM from the wall outlet immediately. Do not attempt to service the DVD-ROM drive yourself, and refer servicing to qualified service personnel immediately.

- If objects of any kind have been entered into your DVD-ROM drive
- If liquid has been spilled into your DVD-ROM drive
- If your DVD-ROM drive has been exposed to rain or water
- If your DVD-ROM drive does not operate normally when the operating instructions are followed
- If your DVD-ROM drive has been dropped or your DVD-ROM drive has been damaged
- If your DVD-ROM drive exhibits a distinct change in performance



Precautions For Use

• Installation Conditions

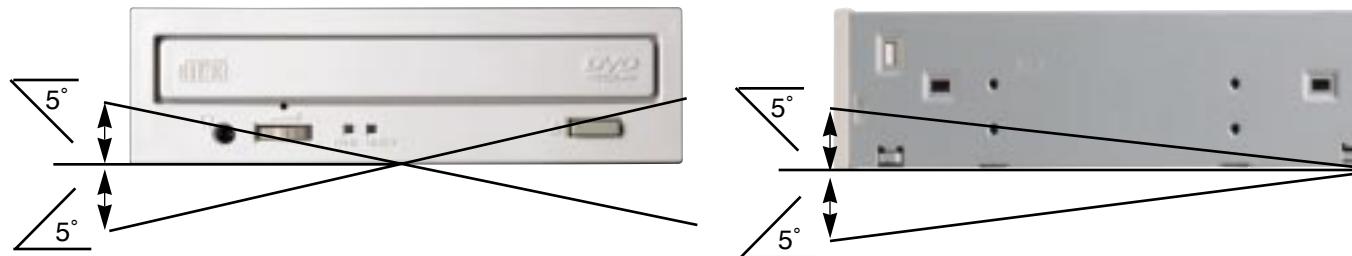
Do not install your DVD-ROM drive under the following conditions. Dust on the pick-up lens and/or disc, heat or vibration may lead to trouble or negatively affect performance.

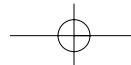
- In a place where an operation temperature reaches beyond the specified temperature of 45°C
- High humidity locations
- In a location subject to extreme changes of temperature and humidity
- In a room where dust density is higher than 0.1 mg/m³
- In a room that has air conditioning with humidity control which may scatter calcium combinations and other powdered substances
- In a room containing exhaust gas fumes such as exhaust gas from gasoline or diesel engines or corrosive gas such as H₂S (Hydrogen sulfide)
- In a location subject to vibration and jarring during drive operation
- In a location subject to sudden shock and jolt during drive operation

• Mounting Requirements

Use screws to mount your DVD-ROM drive tightly in the horizontal position. The inclination of your DVD-ROM drive should be within 5° as shown below. The following can occur if these requirements are not followed:

- The disc may jump out and be damaged when the tray is opened.
- Your DVD-ROM drive may be damaged.
- Your DVD-ROM drive may not function at full performance.





- **Mounting screw**

The screws must be ISO (M3X0.5) to mount the DVD-ROM drive tightly and to avoid damaging the mechanism inside the DVD-ROM drive. (See page 10)

- **Moving your DVD-ROM drive**

Remove the disc and close the disc tray before moving the DVD-ROM drive. If your DVD-ROM drive is moved with the disc loaded or the disc tray opened, both the disc and the DVD-ROM drive may be damaged.

Precautions For Care

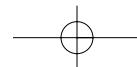
- **Cleaning of the DVD-ROM drive, discs**

- Never clean your DVD-ROM drive and discs with silicon cloths or cloths soaked in water, solvents (thinner, benzine), abrasive cleaner, anti-static sprays, any record cleaner sprays, liquid cleaner or aerosol cleaner. It may damage or discolor the coating of the DVD-ROM drive and damage or deform discs.
- Clean your DVD-ROM drive including the disc tray and discs with a clean, dry, soft cloth at least once a month.

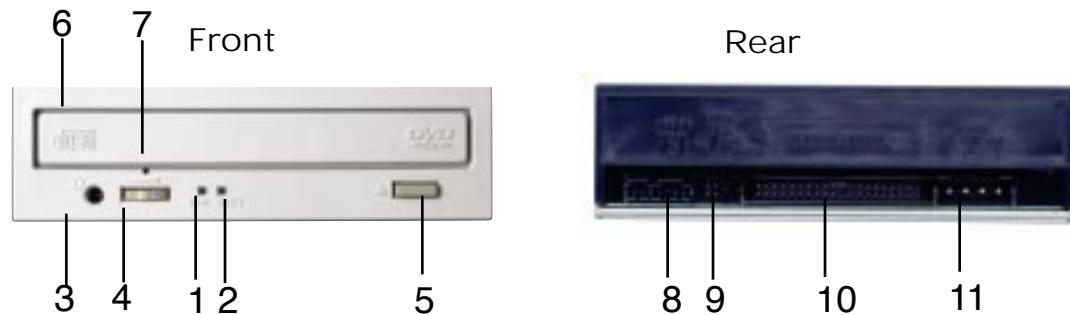
- **Cleaning of disc**

If you begin to get error messages that your drive is unable to read a disc, it may mean that cleaning is needed.

- Eject the disc and visually inspect the disc for scratches.
If there are scratches on the surface of the disc, change the disc.
- Eject the disc and clean as follows:
 1. Clean the disc with a clean, dry, soft cloth.
 2. Clean your DVD-ROM drive's pick-up lens using a cleaning disc.



Controls and Functions



1) DVD INDICATOR

Indicator lights green when DVD-ROM media is detected in the drive.

2) LOADING/UNLOADING/BUSY INDICATOR

Indicator blinks amber only when the disc tray is being opened or closed, or when the DVD-ROM drive is accessing data.

3) HEADPHONE JACK (3.5 mm)

4) HEADPHONE VOLUME CONTROL

Adjust the headphone volume.

5) OPEN/CLOSE BUTTON

Press this button to open or close the disc tray.

6) DISC TRAY

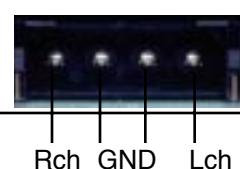
When the power of the DVD-ROM drive is turned off, the disc tray cannot be opened and closed.

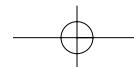
7) MANUAL EMERGENCY EJECT HOLE

Only in case of emergency. If the disc tray does not open when the OPEN/CLOSE button is pressed, the DVD-ROM drive's Manual Emergency Eject mechanism may be activated. This should be used only in case of an emergency. (See page 12 about Manual Emergency Eject Procedure)

8) AUDIO OUTPUT TERMINAL

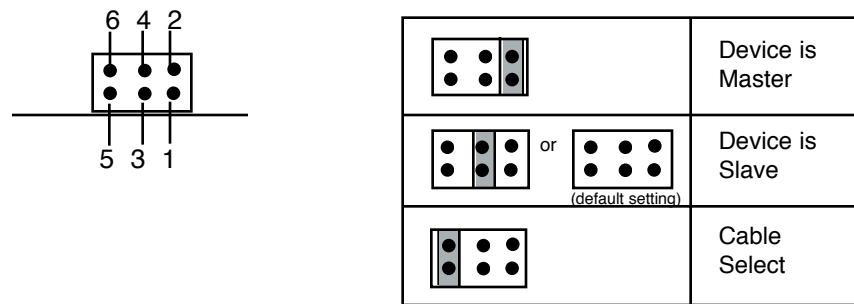
Circuit Board





9) DEVICE CONFIGURATION JUMPER

This connector is used to set operation modes such as Master, Slave and CSEL



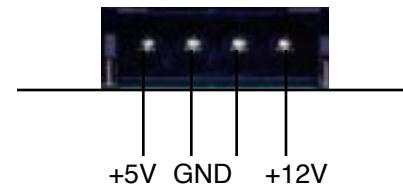
10) ATAPI INTERFACE CONNECTOR

ATAPI bus connection (40 pin)

11) POWER SUPPLY CONNECTOR (DC Input)

For connecting the power supply cable.

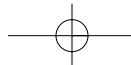
Circuit Board



Installation Requirements

HARDWARE

- DVD-ROM drive
- Interface card
- Interface cable
- Power supply cable
- Mounting screws



HARDWARE OPTION

- Audio connecting cable
- Sound card

SOFTWARE

- DVD-ROM device driver

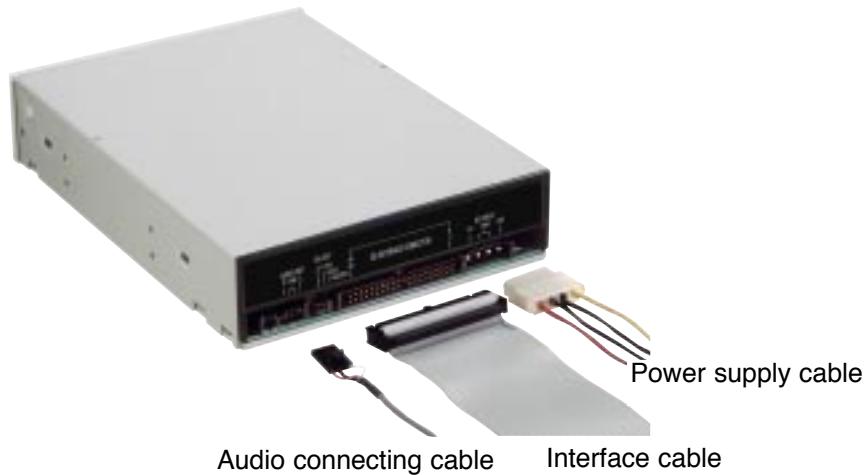
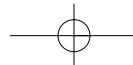
NOTE: If you need an interface card, interface cable or DVD-ROM device driver, contact your dealer.

Hardware Installation

To install this DVD-ROM drive in the host computer, refer to the instruction manual of each host computer. To install the interface card in the host computer, refer to the instruction manual of each host computer and each interface card.

Install the DVD-ROM drive following the general installation procedure shown below:

- 1) Check the Device Configuration Jumper Settings of the DVD-ROM drive such as Master, Slave, CSEL. (See page 9)
- 2) Turn off the host computer and unplug the power supply cable of the host computer.
- 3) Remove the host computer cover.
- 4) Install the DVD-ROM drive into the host computer and mount tightly with screws.
- 5) Check the settings of the interface card.
- 6) Install the interface card in the slot.
- 7) Firmly attach the interface cable from the interface card to the DVD-ROM drive.
- 8) Firmly attach audio connecting cable as required.
- 9) Finally, firmly attach a spare DC power supply cable from the computer power supply to the DVD-ROM drive.
- 10) Install the host computer cover.

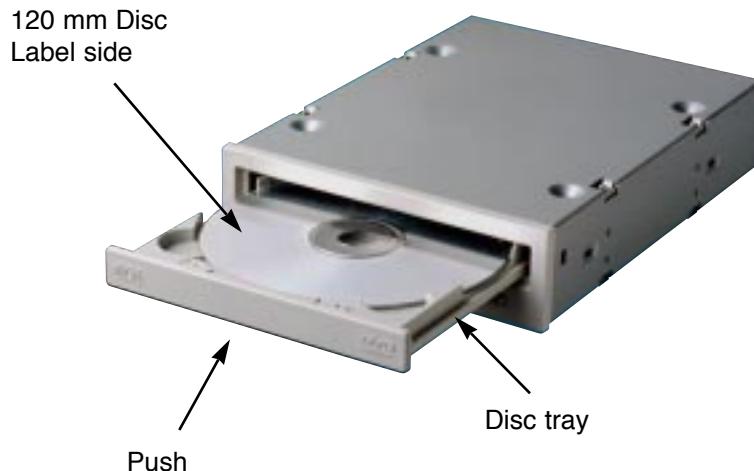
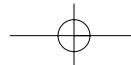


Software Installation

To install DVD-ROM device driver in the host computer to operate this DVD-ROM drive, refer to the instruction manual of each DVD-ROM device driver.

Drive Operation

- 1) Turn on the SYSTEM, including the DVD-ROM drive.
- 2) Press the OPEN/CLOSE button of the DVD-ROM drive to open the disc tray.
- 3) Place the disc in the center of the disc tray, label side up as shown on the following page.
- 4) To close the disc tray, press the OPEN/CLOSE button on the DVD-ROM drive or push lightly on the center of the front of the disc tray as shown below. The disc tray will automatically close the rest of the way.
- 5) Operate referring to the instruction manual of DVD-ROM device driver.

**IMPORTANT:**

- Do not press the OPEN/CLOSE button while the host computer is accessing the disc. It may cause an error.
- When not using the DVD-ROM drive, keep the disc tray closed. It will prevent the entry of dust and dirt, and reduce the requirements for disc and lens cleaning.

CAUTION:

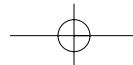
If you do not observe the following items, you may have problems opening and/or closing the disc tray, and damage may be caused to the mechanism of the DVD-ROM drive.

- Never use a damaged, broken or deformed disc.
- Do not press down hard on the disc tray when opening and closing it.

Emergency Eject Procedure

Only in case of emergency:

If the disc tray does not open when the OPEN/CLOSE button is pressed, make sure that the power of the DVD-ROM drive is turned on and that the lock function has not been activated. If the disc tray still will not open, the DVD-ROM drive's Manual Emergency Eject Mechanism may still be activated. This should be used only in case of an emergency.



Removal Procedure

1. Turn off the DVD-ROM drive and wait at least 15 seconds until the disc stops rotating.
2. Insert the Eject Bar (for example, a straightened paper clip) into the Manual Emergency Eject Hole about 25 mm (1 inch).
3. Pull the disc tray.

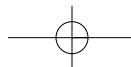


NOTE: If it is necessary to use the emergency eject procedure to open the drive, the tray should be closed by turning on the power and pressing the OPEN/CLOSE button. Transporting the drive before it has been properly closed may cause damage to the mechanism.

Lens Cleaning

A commercially available "Laser Lens Cleaning Disc" may be used to clean up the pick-up lens of the DVD-ROM drive. Use the Compact Disc Laser Lens Cleaner LLC-1. (by AUDIO SOURCE in U.S.A., by AKUSTIK SISTEME VERTRIEBS GHBH in GERMANY and by SAEC COMMERCE CO., LTD. in JAPAN.)

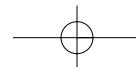
- 1) Turn on the DVD-ROM drive.
- 2) Using the small brush supplied with the cleaning disc case, straighten up the disc cleaning brushes on the back of the cleaning disc.
- 3) Place the cleaning disc in the disc tray with its arrow marked on the disc at front.
- 4) Press the OPEN/CLOSE button or push the center of the disc tray lightly and close the disc tray.
- 5) After about 20 seconds, the pick-up lens is cleaned by the cleaning disc.
- 6) Press the OPEN/CLOSE button and remove the cleaning disc.
- 7) Set the cleaning disc in its case with the disc cleaning brushes in the pad hole.
- 8) Restart the SYSTEM.



Trouble Shooting

- If your DVD-ROM drive does not operate properly, check the following table.
- You may have to check the other devices included in your SYSTEM.
- If you cannot locate the cause, turn off the power of the SYSTEM, including the DVD-ROM drive, immediately unplug the power supply cable of the SYSTEM from the wall outlet, and contact your dealer.
- When calling for service, provide the following information:
 1. Model name
 2. Detailed symptoms

Symptoms	Possible causes	Remedy
The DVD-ROM Drive does not operate even when a disc is loaded.	1. You place the disc upside down in the Disc Tray. 2. The disc is dirty. 3. The pick-up lens is dirty. 4. The disc is scratched or warped. 5. Cable connection is incorrect. 6. The program is incorrect. It is	1. Place the disc right side up in the Disc Tray, then load it. 2. Clean the disc surface. 3. Clean up the pick-up lens. (see page 13) 4. Change the disc. 5. Turn off your SYSTEM and reconnect cables correctly.
The Disc Tray cannot be opened. Communications between the host computer and the devices on the interface cable are not successful.	1. There are devices with the same Device Configuration jumper setting on the interface cable.	1. Give each device a different Configuration Jumper Setting.



Mechanical Dimensions

